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ABSTRACT

This report presents the concepts and issues discussed at a Regional Symposium on Long-term Planning in Higher Education held in Dhaka, Bangladesh, September 21-30, 1986. Chapter 1 explores some fundamental issues about the rationale for the objectives of long-term planning. It defines long-term planning in higher education, considers its desirable characteristics, and discusses why it is needed in higher education. Chapter 2 considers the status of and broad trends in long-term planning of higher education in the region. Attention is given to the types of agencies responsible for higher education planning, arrangements for co-ordinating and integrating such planning with national planning, special problems, and constraints to implementation. Chapter 3 provides a regional overview of recent planning approaches and experience. Chapter 4 explores the relevance and application of particular approaches, methodologies, and techniques to the task of long-term planning in higher education. Organizational and management issues related to long-term planning are considered in the fifth chapter. The final chapter presents conclusions, including possible follow-up activities proposed by countries of the Asia/Pacific region. An appendix provides a list of participants. (GLR)

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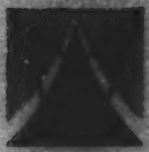

Regional Co-operative Programme
in Higher Education for Development
in Asia and the Pacific

Long-Term Planning in Higher Education

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Long-Term Planning in Higher Education

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PREFACE

This publication is an outcome of the Regional Symposium on Long-term Planning in Higher Education held in Dhaka, Bangladesh during 21 to 30 September 1986. The Symposium was organized jointly by the UNESCO Principal Regional Office for Asia and the Pacific, the Bangladesh Ministry of Education, and the Bangladesh University Grants Commission.

In recent years, higher education in most countries of the Asia – Pacific region has witnessed phenomenal expansion and development. These changes have been attributed to demographic trends, economic pressure and a growing belief in the efficacy of higher education in furthering national development and improving the quality of life.

The more national leaders confront pressures to expand educational provision and services, the more they become conscious of the need to match the growth of this sector to the goals and resources of the country as a whole. The task of transforming systems of higher education into more efficient and relevant instruments for socio-economic development or of maintaining quality calls for systematic planning, particularly with a long-term perspective. Such planning needs to conform to both the economic and social development plan of a country, as well as to the technological developments which affect the form and content of higher education.

Long-term planning, as an activity of developing countries, is faced with several difficulties. Among these are: inapplicability of western models, lack of trained personnel, lack of appreciation of the value of long-term planning, instability or discontinuity of political leadership that will see plans to completion, and inadequacy of valid and reliable information that serve as bases for planning. Despite these handicaps, some countries of the Region have taken up the planning of higher education in a long-term perspective.

The objectives of the Symposium were to:

a) develop better appreciation of the concept and value of long-term planning of higher education and related issues;

b) serve as an avenue for sharing of experiences with respect to the status and trends in the planning of higher education among the countries represented;

c) discuss the approaches, strategies, methodology and organizational aspects of long-term higher education planning; and

d) promote further co-operation among participating countries through joint studies, direct communication, and exchange of intellectual resources.

The Symposium was inaugurated by Mr. Momenuddin Ahmed, Minister for Education and Cultural Affairs, Bangladesh. Other speakers at the opening session were Mr. Qazi Azher Ali, Secretary of Education, Bangladesh, and Professor M.A. Bari, Chairman, University Grants Commission, Bangladesh.

Nineteen senior academics, planners and administrators of higher education, including two Resource Persons from 12 countries participated. A list of participants is provided in the Appendix A.

Two themes papers on (a) 'Review of Conceptual and Organizational Aspects of Long-term Planning for Higher Education' and (b) 'Methodological Approaches and Techniques for Long-term Planning of Higher Education' prepared by the resource persons, and the country reports presented by the participants were used as substantive working documents. These were supplemented as reference materials by national case studies on higher education in China, India, Pakistan, Philippines, the Republic of Korea, the Socialist Republic of Viet Nam and Sri Lanka.

Following the symposium, the final draft report adopted at the closing working session was edited by Prof. G.S. Harman in order to make a more coherent presentation of the concepts and issues discussed, the perspectives on these as seen through regional experiences, and the conclusions and recommendations developed.

Chapter One explores some fundamental issues about the rationale for and objectives of long-term planning. It considers what is meant by the term long-term planning for higher education and sets out working definitions agreed to by participants. It then considers those characteristics that were seen to be highly desirable in any effective long-term planning, and discusses why long-term planning is needed among the higher education systems of the Asian and Pacific Region. Finally, an attempt is made to specify some of the

key questions that long-term planning must address, and to draw attention to some important considerations needing attention in setting goals and objectives.

The second chapter considers the status of and broad trends in long-term planning of higher education in the region. It reports that country experiences vary greatly, but that nations with planned economies tend to have had a much longer experience in educational planning. Attention is given to the types of agencies responsible for planning in higher education, arrangements for co-ordinating and integrating planning of higher education with national planning, priority given to planning for higher education, special problems, future problems, and constraints to implementation.

Chapter Three provides a regional overview of recent planning approaches and experience. Attention is paid to the context for planning, the relationship between higher education planning and national development planning, approaches, institutional mechanisms employed, and some aspects of planning experience.

Chapter Four explores the relevance and application of particular approaches, methodologies and techniques to the task of long-term planning in higher education. It focuses, in particular, on the methodologies and techniques considered by participants as being applicable and useful in the countries represented, factors which appear to inhibit the application of particular methodologies and techniques, the adequacy of information structures, and criteria which might guide the choice by any national system of higher education of particular methodologies and approaches.

Organizational and management issues related to long-term planning of higher education are considered in the fifth chapter. Particular attention is given to integration (or the co-ordination and synchronization of higher education planning with other planning), multi-level planning, participatory planning and the institutionalization of planning.

The final chapter presents conclusion, including those related to follow-up activities by countries of the Asia – Pacific region. These were based on three assumptions agreed to by participants: that higher education can contribute significantly to national development and to economic and social change, that expenditure on higher education should be treated as investment in human resource development, and that effective linkages must operate between higher education on the one hand, and other levels of education and other sectors of the economy on the other hand.

Chapter One

RATIONALE AND OBJECTIVES OF LONG-TERM PLANNING OF HIGHER EDUCATION

The notion of long-term planning of higher education has been accepted enthusiastically in a number of countries of the Asia – Pacific region. However, before exploring the extent to which such planning has been adopted and discussing methodological and organizational aspects, the symposium addressed some fundamental issues about the rationale for and the objectives of long-term planning. In these discussions, five key questions were explored:

a) What is long-term planning of higher education?
b) What characteristics are desirable in such planning?
c) Why is long-term planning needed among the higher education systems of the Asian and Pacific region?
d) What should be the tasks of long-term planning for higher education?
e) What criteria may be useful in setting goals and objectives of higher education within the context of long-term planning?

The purpose of this chapter is to report on the discussion of these questions and, in doing so, to draw on the contributions of the symposium participants as well as on material presented in country reports and the two theme papers.

Defining long-term planning of higher education

In the literatures of the fields of educational planning and higher education, many definitions have been developed of educational planning in general and of higher educational planning in particular. Thus, it is unlikely that any one definition of long-term planning of higher education will gain universal acceptance.

During the symposium, various definitions were examined. Two general definitions of educational planning in particular received favourable comment. The first by Philip H. Coombs (1970) defines

educational planning in its genetic sense as 'the application of national, systematic analysis to the process of educational development with the aim of making education more effective and efficient in responding to the needs and goals of its students and society'. The second by McMeeck in (1975) describes educational planning as 'the continuous process of providing information to decision-makers on how well the educational system is accomplishing its goals and how the cost effectiveness of such accomplishment can be improved'. Taken together, these two definitions draw attention to various important elements that received considerable attention in the various discussions – that educational planning should be thought of a process, that it should be directed towards meeting specified goals and the needs of both individuals and society at large, that there must be concern with total costs as well as with cost effectiveness, that the process of planning should be dependent on information and analysis and not on random choice, and that planning efforts should be directed to achieving improvement and not merely achieving change for its own sake.

With regard to the planning of higher education, it was noted that definitions can be classified broadly into two types, the narrow and the broad. The narrow definitions tend to be those developed by economists and see planning for higher education strictly in terms of forecasts of demand for skilled personnel and of student places in higher education institutions, and in terms of the efficient use of scarce resources. In contrast, the broad definitions conceive of planning in terms of a process with sequential steps or stages. Such a process usually involves the assessment of needs and demands, the setting of goals and objectives, the establishment of enrolment targets and strategies for development, projecting resource needs, securing governmental authorization, translating targets and strategies into particular programmes and policies, mobilizing and allocating resources, and the specification of detailed procedures to ensure effective implementation. It should be noted that the narrow definitions focus attention on what is, in practice, amongst the most difficult tasks of planning in higher education, that of making manpower and social demand forecasts and establishing enrolment targets in global terms as well as for particular fields of study and types of courses. Further, it should be noted that such definitions often appear to be based on the assumption that those targets set will be

implemented automatically. In other words, they assume but do not focus on a later process of sequential development and application of the particular plan. While the task of forecasting demand and student numbers is of great importance and requires high levels of skill, many participants in the symposium saw considerable value in thinking of planning for higher education in the broader way as being a process, with a number of specified, sequential stages. One major advantage of this view is that it directs attention to various other key tasks apart from forecasting demand that need to be undertaken, such as projecting resource needs, consultation between planners and others, and devising strategies, policies and programmes to achieve effective implementation. Participants considered that there is little value in developing any plan for higher education development unless there are reasonable prospects of its implementation.

As a result of group discussions, a definition was developed which received substantial support from many participants. This definition sees long-term planning for higher education as a process of determining future goals, policies and strategies for at least a ten year period, taking into account socio-cultural, economic and political realities of the particular country, the needs and aspirations of individuals and the society, as well as limitations in resources and the current capacities of higher education institutions. Ideally, this process should include such activities as the systematic collection and analysis of statistical data and findings from research studies, consultation with higher education institutions and a wide range of groups and organizations, detailed resource allocation, devising appropriate mechanisms for implementation, and establishing means of monitoring progress and assessing achievements. Planning for higher education should include developing and articulating a vision of the future, as well as devising mechanisms to attempt to realize this future. Not only should a plan attempt to forecast the future, but it also should help define what a desirable future might be. In some senses, planning for higher education should be not only a technical exercise but also an effort by educators and governments to convey to society at large some idea of what role higher education could and should play in economic and social development. On the other hand, as well as being visionary, a well constructed plan should provide clear guidelines and directions towards achieving particular desired goals. It should be a 'blue-print' for action.

A distinction is sometimes made between a plan on the one hand and strategies and programmes on the other. According to this perspective, a plan is defined as being more global in nature and concerned with broad objectives, while strategies and programmes are seen as being more restricted and specific, following logically from a plan. While such a distinction has value for particular analytical purposes, members of the symposium agreed that the concept of planning should not be limited to the setting of goals and objectives, since effective planning, as already noted, must also involve detailed specification of means to ensure that goals and objectives are realized.

One definitional problem identified in the discussion relates to the use of the term 'higher education'. In some countries in the region, the term is used to refer to those forms of post-school education followed by students after completing a full-secondary education (i.e. graduation from higher school), whereas in other countries it is used more broadly to refer to many or all forms of post-school education, including vocational and technical education. Such differences in definition can provide difficulties in making detailed comparisons between aspects of higher education planning of the various countries in the region. Apart from this, members of the symposium considered it of great importance that appropriate mechanisms should be developed to ensure effective co-ordination of planning for all post-school education, especially that of a formal nature. In other words, planning for universities should not be isolated from planning for various forms of vocational and technical education.

While higher education planning is a function of overall educational planning, it differs from educational planning in general in three important ways. First, since it deals with education past or later than the stages of compulsory (or mass) education, assumptions have to be made about the numbers of students likely to be completing secondary education, and qualified and wishing to continue to higher education. Such participation rates of school leavers are not easy to predict. Second, in many countries, attention has to be paid to the possible aspirations of adults as well as school leavers with regard to higher education enrolments. Third, because of the wide variations of interest and aptitude among students, and the diverse needs of society for trained personnel with a wide variety of expertise and skills, higher education must, of necessity, be concerned with courses covering a wide range of disciplines and fields

of study, as well as leading to different types of awards. One fundamental problem of considerable difficulty for planners is deciding on appropriate mixes of disciplines and types of courses. Sometimes, such as in Sri Lanka in recent years, a deliberate effort is made to change the balance of enrolments between different fields (and in particular between science-based courses and others).

Long-term planning for higher education differs from other planning of higher education because of its particular time-horizon. The symposium accepted as a working definition that long-term planning necessitates a time-scale of at least ten years. In the discussions many participants tended to use the designations suggested by Coombs of short-term plans spanning one to two years, medium term spanning plans four to five years, and long-term planning spanning at least ten years. It was noted that many national development plans in the region are of at least ten years duration and it was generally agreed that there are thus strong arguments in terms of planning co-ordination for long-term plans for higher education to be of at least ten years in time-span. It was further noted that countries such as China are adopting a planning time-frame of 15 years and more for the long-term planning of higher education.

Desirable characteristics of effective long-term planning

During the discussions at the symposium, various characteristics were identified as being desirable in any effective approach to long-term planning of higher education in the region. Those characteristics so identified included the following:

a) **Integration of long-term planning of higher education with other planning**

Effective long-term planning of higher education cannot be carried out effectively in isolation; rather it must be well integrated with other planning, both within the education domain and in the broader society. Both the scholarly literature on higher education planning and the contributions of many symposium participants put considerable emphasis on the need for long-term higher educational planning to be an integral part of general economic and social planning. It was noted that in a number of countries higher education planning constitutes a key and explicit component of national development plans. It was argued by a number of participants that, in

such cases, higher educational planning should be detailed and specific and should involve inputs to a substantial degree from professional educators, higher education co-ordinating agencies and individual higher education institutions. Higher educational planning also needs to be well-integrated with planning of other sectors of education, especially secondary education and technical and vocational education.

b) **Future-looking and proactive in orientation**

Effective planning does not merely react to environmental conditions, but seeks to take initiatives and work towards creating desirable futures. Professional educators engaged in planning have a responsibility to attempt to convey to governments and the broader society a sense of the purposes of higher education and how higher education might serve societal interest to a greatest extent possible. Effective planning is also proactive rather than reactive. Higher education should seek to work to achieve the broad goals of excellence, equity and efficiency and attempt to create opportunities for the greatest number of individuals possible to benefit. Further, higher education should be dynamic, flexible and provide for continuity. It was reported that in a number of countries lack of continuity has adversely affected the development of higher education systems. As a result, the growth and orderly expansion of higher education has been retarded, and sometimes resources have not been used efficiently.

c) **Systematic and professional**

Effective long-term higher education planning needs to be systematic, well-organized and conducted in a suitable conceptual and organizational framework. There is a need for research studies, systematic analysis of information and sound preparation of detailed plans, with proper co-ordination between state planning bodies and individual institutions. Especially in such complex tasks as manpower forecasting, social demand forecasting and the analysis of student flows from one year to another, professional skills of a high order are needed. The view was widely accepted among participants that a multi-disciplinary team approach is preferable, since it is unlikely that any one professional expert will be competent at a high level in all necessary areas of expertise.

d) **Realistic**

While good planning displays imagination and vision, at the same time it must be tinged with realism, taking into account not only what is desirable, but also what is feasible. Highly competent professional planners need the ability to combine technical competence of a high order with the ability to make judgements about about political, administrative and social feasibility in terms of what might be acceptable and possible at a given point in time.

e) **Broad in scope and content**

Good plans should take into account needs relating to social and cultural development, political stability and individual and group aspirations as well as economic needs. Ideally, a good plan should encompass both public and private sectors of higher education, all forms of higher and post-school education, and higher education in various fields of study and leading to different types of awards. A number of participants reported difficulties associated with lack of overall co-ordination of planning for higher education at the national level. For example, in a number of countries higher education for agriculture and medicine is planned and co-ordinated separately from other forms of higher education. Good plans should be detailed and specific and provide not only manpower and/or social demand forecasts but cover topics such as: institutional development; specific roles for different institutions and types of institutions; curriculum issues; student assessment; evaluation of courses, teachers and administrators; and broad strategies and thrusts for teaching, research and extension. In a number of higher education systems, there appears to be a need for increased attention to the problems of distribution and balance of students among different fields of study and among courses of different levels (especially at sub-degree levels). Possibly information on experience in this area could be shared more widely among countries of the region.

f) **Mechanisms for accountability and review**

A good plan provides for mechanisms to monitor progress and to assess achievement, both at the level of individual institutions and system-wide. Ideally it also should specify criteria and indicators for evaluation. Review of achievements in one period of planning can provide important inputs into planning for the next period. Good planning learns meaningfully from previous planning experience.

g) **Official commitment**

A well-thought out and carefully argued planning document loses its point unless it is followed or likely to be followed. Thus, effective planning requires, as part of the process, stages involving negotiation and consultation at the highest level of government, leading to official authorization. Such authorization may take the form of legislation, but in other cases authorization may be achieved through an official decree or a ministerial statement.

Need for long-term planning

Many reasons can be advanced in favour of long-term planning of higher education and a number of these have been referred to already in the discussion of desirable characteristics. Perhaps the most important reason why many nations of the Asia – Pacific region believe they should undertake long-term planning is that resources are severely limited and there are tremendous pressures to develop higher education at a rapid rate. The rate of growth of Indian higher education illustrates well the high rate of growth in the region. In 1951 India had 8 universities, 700 colleges and 200,000 student; by 1985 it had some 150 universities, 5,500 colleges and 3,500,000 students. Planning provides a means of achieving more efficient use of resources, of establishing priorities between competing claims and achieving greater continuity in development.

In the second place, long-term planning is needed to meet manpower needs and to secure a better match between the needs of employers on the one hand and the supply of trained personnel on the other. In many countries, there is often a major gap between the supply of and demand for trained personnel, either leading in particular fields to serious shortages or to major over-supply. Apart from this, planning of a long-term nature is necessary because of the long lead time necessary in order to train highly specialized personnel such as engineers and doctors. Planning is also necessary to overcome current or past imbalances between fields of study. For example, as already noted in response to manpower needs in its current corporate plan for university education, Sri Lanka is deliberately making substantial cuts in the proportion of students entering arts disciplines while at the same time substantially increasing enrolments in the biological and physical sciences.

A third reason is that long-term planning is necessary in order to assist scientific and technological development, and so to promote national economic development. Among the participants at the symposium, some argued strongly that a most important role for higher education in developing nations is to assist in the transfer of appropriate technology from the international community.

Fourth, effective long-term planning of higher education is desirable in order to address problems in social and cultural development and to achieve greater degree of equity. Within most countries of the region, there are increasing pressures to provide greater access to higher education by disadvantaged groups who in the past have found great difficulty in benefiting directly from the expansion of higher education. Without systematic planning and various deliberate efforts, it is unlikely that the needs of particular different disadvantaged groups (whether the disadvantage relates to gender, location, ethnic or socio-economic group of some other factory will be addressed to a significant degree.

A fifth reason why long-term planning is needed is that effective long-term planning tends to strengthen any higher education system in various less direct ways. For example, by specifying roles for individual institutions and types of institutions, a plan can reduce harmful intra-institutional competition for students and funds, and protect the work of the research universities. Effective planning also can provide mechanisms of accountability, incentives towards greater efficiency and economy (because both outputs and inputs are monitored), and means to achieve a higher degree of institutional differentiation of function. Under particular circumstances, effective long-term planning may provide for a greater degree of institutional autonomy.

Finally, through effective long-term planning it is likely that a more favourable environment of public opinion and community support for higher education may be generated. Good plans are one means by which the views of society can be sought and the needs and purposes of higher education articulated.

Tasks of long-term planning of higher education

Long-term planning of higher education involves a number of different tasks. One way of understanding the range of tasks involved

is to consider the major questions that such planning needs to address. These may be summarized as follows:

a) What are the needs both in terms of manpower requirements and social demand, and what are the current arrangements to meet these?

b) What should be the goals and objectives of the higher education system and its various institutions, and what priority should be accorded to each?

c) What are the best ways to achieve these goals and objectives in view of needs and current institutional arrangements?

d) What enrolment targets should be set for particular institutions and courses?

e) How much of the nation's wealth can be devoted to higher education, both to sustain and maintain current activities and to facilitate future development?

f) Who should bear the costs, and in what proportion?

g) How should the available resources be allocated to institutions and courses?

Setting goals and objectives

One task of crucial importance in the process of long-term planning is the setting of goals and objectives for both the higher education system and its component parts. Ideally, this task is one that should involve wide consultation and discussion, since it is highly desirable that broad agreement should be reached.

An important distinction can be drawn between the terms 'goals' and 'objectives'. Goals can be considered as being more global in character and as being directed towards broad ends, while objectives can be thought of as being more specific and providing detailed direction for the achievement of goals. Objectives for higher education should relate closely to specified objectives for national development, but also they should be geared to both individual and sociocultural needs and aspirations. Ideally, objectives should transcend national boundaries and thus be concerned also with relations between nations and common aspirations of the human family.

While the specific goals and objectives of any higher education system depend on the unique needs and concerns of the particular country and its people, there are a number of basic goals that appear common to all countries in the region. These include the following:

a) Production of socially useful, responsible and independent citizens, willing and able to play an active role in the full development of the society.

b) Production of skilled personnel to meet manpower requirements.

c) Provision of student places of a wide variety of kinds in order to meet social demand and the aspirations of individuals and their families.

d) Creation, conservation and application of knowledge.

e) Transmission and interpretation of cultural heritages, and encouragement of cultural and artistic development.

f) Development of individuals with skills in analysis, conceptualization and communication, and able to apply knowledge and skills to particular fields.

Apart from these common objectives of countries of the region for higher education, other even more basic underlying goals were identified. They may well be underlying goals for all systems of higher education. They are as follows:

a) Excellency – higher education must meet high standards of quality.

b) Equity – the system of higher education must be fair and just to various groups and sections in the society.

c) Efficiency – the system of higher education must be cost effective and must optimize the use of scarce resources.

d) Effectiveness – higher education must be relevant and meet perceived social, cultural and economic needs; it must be successful in terms of outcomes.

In any society it is often impossible for all the goals of higher education to be realized in full measure, and so one task of key importance for planners is to help in the establishment and articulation of priorities. This is a difficult assignment since often various

groups and individuals in a society have different views about the importance of different goals or objectives. But the task of establishing priorities is of great importance since an effective plan must specify priorities as well as set out goals and objectives.

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Chapter Two

STATUS AND TRENDS OF LONG-TERM PLANNING OF HIGHER EDUCATION

One assumption on which the symposium was planned is that countries of the Asia – Pacific region vary in the adoption and state of institutionalization of long-term planning of higher education. Thus it was considered desirable in the discussions to attempt to assess the extent to which the countries represented had evolved long-term plans as well as to share experiences among participants with respect to the procedures and mechanisms employed in the process of generating those plans. In addition, the symposium dealt with such questions as the priority accorded to higher education vis-a-vis other government programmes; the achievements and problems in long-term planning of higher education; and examples of effective planning and future prospects as perceived by the participants.

Country experiences

While recognizing the possible shortcomings in providing definitive answers, participants reported on the status of long-term planning in their countries at the present time. It was observed that, in a number of countries, long-term planning of higher education operates in one form or other. While other participants reported less systematic approaches to long-term planning, it was noted that certain countries had long-term plans at an earlier period but not at the present time, while in other cases such plans are incorporated or embedded in national development plans but are not solely plans for higher education. Some long-term plans were labelled perspective development plans, not long-term plans, albeit the period covered may have been of varying lengths of time. It was agreed that four to five year plans would be best regarded as medium-term plans and not as long-term plans. All the countries of the region appear to have at least medium-term plans. Even in the latter cases, the medium-term

plans are not necessarily separate from the development plans of the country nor independent of the total educational plan which would then cover primary, secondary and technical and vocational education. In almost all cases, higher education is regarded as part of the social services sector development plan.

The symposium was able to consider only the experiences of the twelve countries from which the participants came. The research literature did not help greatly here; it does not provide even recent information about the extent internationally of the use of long-term planning of higher education. The only data available to participants was that from the International Bureau of Education of UNESCO which collected in 1962 questionnaire answers from ministries of education of 75 countries. The results showed that only 40 per cent of the countries had provision for the organized general planning of education, although a tendency was noted to lay down long-term development plans in many countries. In the absence of general educational planning, the data showed that there were long-term plans for providing materials necessary to educational development, such as teachers, facilities and funds. The study also found that 40 per cent of the countries that replied to the questionnaire had or were setting up educational planning services. It was also known that no uniform procedure was followed in the preparation of educational development plans nor in the quantitative and qualitative determination of needs and resources for making forecasts. The most significant finding, however, was that long-term, ten-year plans were reported then (1962) in eleven countries, of which only Denmark had one on higher education. Another eleven countries had 20-year plans and these were mostly in Eastern Europe. It is perhaps safe to conclude that country experiences in long-term planning of higher education vary greatly, but that nations with planned economies seem to have had a much longer experience in educational planning.

Planning bodies

One of the important principles in effective planning that was mentioned in the discussions is the desirability of conducting planning within a well-developed formal framework or structure. The symposium participants reported on those specialist agencies that are responsible in their countries for planning of higher education at the macro or national level. In Bangladesh, India and Pakistan higher education planning is a joint activity undertaken by the nation's

central planning agency, the University Grants Commission and the Ministry of Education; detailed planning for universities is carried out largely by the Commission, while the planning of the rest of higher education is handled by the Ministry of Education, except for planning of agricultural universities which is the responsibility of the Ministry of Agriculture and that of medical colleges by the Ministry of Health. Sri Lanka is another country with a University Grants Commission, but there planning is dependent on effective liaison between the Commission and the Ministry of Higher Education. In China, the State Education Commission is the key agency for higher education planning; it administers the higher education system and has responsibility for implementing the guiding principles, policies and laws formulated by the Central Committee of the Central Communist Party and the State Council concerning higher education. In Viet Nam, the National Assembly determines general guidelines for long-term socio-economic development, and on this basis the State Committee for Planning and the Ministry for Higher Education develop detailed plans for higher education. Nepal has a National Planning Commission which co-operates with the National Development Council, the Ministry of Education and Culture, the National Education Committee and Tribhuwan University in planning for higher education. In Korea, the Ministry of Education has occupied a key place in planning, but currently a special Presidential Commission for Educational Reform is responsible for recommending on major changes. The main responsibility for planning for higher education currently is held by the Commission for Higher Education in Papua New Guinea, by the Ministry of Education, Culture and Sports in the Philippines, and by the Ministry of University Affairs in Thailand.

Arrangements for co-ordinating and integrating the planning of higher education with national planning varies between the different countries of the region. In Nepal, Bangladesh, India and Pakistan this role is carried by planning commissions. In China, co-ordination and integration is the responsibility of the State Education Commission, an inter-ministry body, while in the Republic of Korea these tasks currently are handled by the Presidential Commission for Educational Reform and the Economic Planning Board, in Papua New Guinea by the Ministry of Finance and National Planning, in the Philippines by the National Economic Development Authority, in

Sri Lanka by the Ministry of Finance and Planning, in Thailand by the Ministry of University Affairs, and in Viet Nam by the Ministry of Higher Education. All the countries represented in the symposium had institutional mechanisms for educational planning and even for planning of higher education, as well as central agencies responsible for integrating higher education planning into national development planning. Only Korea, at the time of the symposium, was reported to have organized an ***ad hoc*** Commission for Educational Reform, whose assignment encompassed higher education. Lastly, the importance accorded to the task of planning higher education has been manifested through the establishment of planning bodies, either ***ad hoc*** or regular. The overall responsibility for planning higher education rests with the national or federal government in all the participating countries.

Priority level

The symposium observed that a reasonably high priority is given to higher education in general in countries of the region. Higher education planning is given particular priority in China, Korea, Viet Nam and Thailand, while in the Philippines higher education planning is now receiving greater attention, starting in 1986 under the current administration. The need for higher education planning is being increasingly recognized in other countries, although the priority given to it varies. Professional higher education in all the countries was seen as receiving higher priority than general higher education. Agriculture, engineering, medicine and teacher-training programmes receive relative greater attention than liberal arts and basic science programmes in many countries, although enrolment in liberal arts fields often constitutes the bulk of the student enrolments.

Some difficulties were experienced by participants in specifically identifying the level of priority accorded to higher education planning in their particular countries, but it was observed that generally the education sector, as part of the social service sector, usually receives lower priority when compared to some other sectors financed by government. In almost all the countries represented at the symposium, higher priority is given to primary education, secondary education and vocational education than to higher education. In some countries, public expenditure on education is less in total than expenditure on defence. As reported by participants, the share of GDP

allotted to higher education ranges from 1 to 5 per cent. The future projections, as reported to participants, are in all instances for a greater share of GNP going to support higher education.

Problems

The symposium was of the view that it is inappropriate for plans at the national level to deal specifically and in detail with the instructional content and method, except for perhaps general measures to enhance the quality of teaching. Universities and similar other institutions tend to be jealous of their autonomy and academic freedom, and would not welcome intrusions into their domains. Planning at the macro level may deal broadly with the types of courses or study programmes to be offered, and the types of disciplines to be included from the point of national requirements.

Institutions of higher learning generally enjoy high esteem, yet they and the higher education systems are not free from criticism. As far as the planning of higher education is concerned, there are certain criteria and standards that have not been questioned. For example, some universities are resistent to adjusting their entrance qualifications in the face of changing social factors. In some higher education systems, particular social or ethnic groups have tended to be discriminated against through the way that entrance examinations operate and by other means. The open university model, using new techniques and approaches in learning, has been resisted in some quarters because it is perceived as threatening the status of traditional university teachers.

The discussion during the symposium stressed the need to relate higher education planning effectively to economic planning. It was argued that higher education should be considered as a feeder to the employing sectors of business, industry and government and that the needs of these sectors ought to be taken into account as plans for producing the desired manpower are formulated. Yet there is well-placed apprehension regarding such a strategy. For example, it is difficult to determine in precise terms the number and types of trained personnel that a particular country needs for social and cultural progress. There are, of course, certain non-quantifiable variables that cannot be ignored but are crucial, perhaps not to economic and business development, but to the total development of people. However, the shifting needs and circumstances in a

country may thwart the utility of projected future manpower figures. In some countries, there have been projections of polytechnic graduates required in the short term only to be overwhelmed by the excess supply of university bachelors degree holders who accept jobs even with polytechnic level remuneration. Such discrepancies are liable to continue if manpower planning is not effectively handled in a co-ordinated and integrated manner.

Future prospects

Participants in the symposium considered that in future planning for higher education should depend on more accurate and adequate information, particularly on labour market fluctuations. This possibility has been enhanced by recent advances in computer and other information technology. In several Asian countries, the demand of Middle Eastern countries for highly skilled personnel has become very attractive because of its dollar-earning potential. But predicting labour requirements in such circumstances is difficult because of numerous internal and external factors that can potentially affect demand.

It was argued at the symposium that the planning of higher education can be effective only when appropriate resources for planning are available and are well-utilized. Trained planning experts are required, both at system and institutional levels. Greater use of modern technology also is desirable. In the case of countries where there is resource scarcity, foreign assistance is one way of helping to overcome deficiencies.

In some quarters the belief still exists that economists should play the dominant role in educational planning. However, the likely trend seems to be that in educational planning educators are likely to take the more active role in view of their intimate familiarity with the problems, issues and conditions in the education areas. It was argued by a number of symposium participants that educators should accept the task to diagnose the particular situation, set up the plan, and devise tactics for carrying out their part of it. This was thought desirable since educators are largely held responsible for the quality of education that is the ultimate goal of planning. Interdisciplinary approaches to the planning of higher education seem to be emerging.

The need for further co-operative programmes in the planning of higher education was seen as especially useful in preventing the

repetition of particular problems and failures experienced in the past. Exchange of information about planning experiences as well as of educational statistics and details of successful programmes resulting from educational plans ideally should be shared both within and between the countries.

Constraints to implementation

The symposium identified a number of constraints in the implementation of plans, which include such factors as resource constraints, delays in the procurement of expert staff and essential facilities, and resistance to planned changes. There also may be unanticipated changes, such as currency devaluation and rapid fluctuations in prices affecting plan implementation seriously, especially when plan implementation is tied to overseas loan packages. As well there are other problems of a more practical nature in meeting the specified conditions of loans. For example, if there is no available local means for financing a plan when cost overruns have occurred, such a plan runs the risk of being abandoned or of being seriously curtailed. This is particularly applicable to large-scale ambitious, higher education projects.

Discontinuance may also become a possibility because of political conflicts or disturbances may not allow any serious and sustained educational undertakings, as occur in strike-torn universities or in places where widespread political activism has engaged the participation of various sectors of society.

Nature of plans

It appears that future plans for higher education development in the participating countries are likely to emphasize the following characteristics:

a) Promotion of equity in admissions and in retention of students;

b) Improvement in the rates of graduation;

c) Upgrading of the quality and effectiveness of teaching;

d) Increasing research productivity, relevance and effectiveness;

e) Brodening the extent of information exchange;

f) Providing for alternative financial sources of support in order to increase institutional capability; and

g) Provision for harnessing of new technology.

A number of symposium participants put the view that plans for higher education should emphasize not only enrolment projections and institutional arrangements, but should also cover other topics such as faculty development, curriculum and instructional development.

The symposium noted the gaps that sometimes exist between policy statements and actual formulating of plans on the basis of these policies. There may be a variety of reports of committees and commissions, survey and research reports, and other documents, but they may not be made full use of and legitimized by government as the basis for planning of higher education in a long-term and comprehensive perspective. Effective long-term plans lead to action.

Chapter Three

REGIONAL OVERVIEW

This chapter presents an overview of recent planning experience in the countries of the Asia – Pacific region. It is based on detailed country statements prepared especially for the symposium, and on material provided by participants. The chapter is intended to complement the discussion of status and trends of long-term planning in the previous chapter.

Context

Higher Education has changed significantly in a number of respects in the Asia – Pacific region over recent years. In the first place, there has been a dramatic expansion both in total enrolments and in the number of institutions, reflecting population and economic growth, increased enrolments in secondary education, increased social demand for higher education, and increased demand by employers for highly trained personnel. In Sri Lanka, for example, total university enrolments increased from just over 2,000 students in 1954 to 19,366 students in 1984. Similarly in Nepal higher education enrolments increased from about 250 students in 1951 to several thousands today. In Republic of Korea, the expansion rate has been even more dramatic. After the Second World War Korea emerged with a very small higher education system. Since 1945 its total higher education student numbers increased by 150 times (i.e. from about 8,000 students to well over one million students). Now many Asian nations have large, complex systems of higher education provision. During the last three decades India, for instance, has developed a huge infrastructure comprising some 150 universities and over 5,500 colleges. This extensive provision includes 23 agricultural universities, 150 engineering colleges, 140 medical colleges and 400 polytechnics. To take another example, by September 1985, China had 1,016 higher education institutions of the regular type, with a total enrolment of 1.78 million students. Besides this in the field of higher

education for adults there existed 1,216 schools of various descriptions, including Radio and T.V. universities, institutes of education for in-service training of teachers with a total enrolment of 1.7 million students.

Second, student demand in all countries of the region continues to grow and this is placing severe pressure on limited financial and personnel resources. In some cases, distance education is being used as one way of coping with increased demand and at the same time to cater for the needs of adult learners. In other cases, such as the Philippines, a high proportion of growth has been accommodated in private institutions. In fact, in the Philippines today higher education is predominantly in the hands of the private sector. Of the 1,061 universities and colleges reported in 1982, 724 were privately owned, while only 319 were public institutions. In the same year, 15 per cent of total enrolments were in public institutions and 85 per cent in privately-owned institutions. The Philippines is unusual in the extent to which higher education provision is so heavily dependent on non-government institutions, but in many countries of the Asian and Pacific region the non-government sector plays an important and often expanding role in higher education.

Third, continuing rapid growth in student enrolments and budgetary pressures is acting as a strong impetus towards more efforts in long-term planning and increased government co-ordination of future development. Papua New Guinea, for example is a small nation that is being forced to rationalize higher education provision. In the 1960s and 1970s, its higher education system developed with a minimum of co-ordination; by 1970 it had 30 higher education institutions but with a total enrolment of only 3,500 students. Its government recognizes that, with a decline both in external budgetary aid and export commodity prices, budget outlays to higher education must be reduced and efforts must be made to improve efficiency. Consequently, its Commission for Higher Education in 1985 produced a rationalization plan for higher education for the period 1986-1990. A second example of the trend to greater co-ordination and rationalization is the Philippines where for many years, the system of higher education has been regarded by well informed observers as lacking in co-ordination and planning. The Centre for Research and Communications in the Philippines has described the present system as 'fragmented, compartmentalized and . . . wasteful'. In August 1986 the

Minister of Education, Culture and Sports created a Task Force to 'submit recommendations to rationalize and improve state higher education'.

Fourth, a number of nations wish to increase the research capacity of universities and to direct research efforts more towards the achievement of national goals. In Pakistan, for instance, the University Grants Commission of the national government is emphasizing a number of measures to raise the quality of higher education and to expand research activities. These include encouragement of students to study science and technical subjects; improvement of science education curricula, textbooks and facilities; and development of centres of advanced studies in selected university departments to enable universities to build up viable M. Phil. and Ph. D. programmes. Similar efforts have been pursued in India, where the University Grants Commission has supported the establishment of Centres of Advanced Study and programmes of Special Assistance to selected university departments. More recently the University Grants Commission has launched a new scheme to strengthen the infrastructure of Science and Technology departments on a selective basis and to develop specialized national facilities such as the University Science Instrumentation Centres, the Science Documentation Centre and the Nuclear Science Centre.

Relationship with national development planning

For a number of years, in many countries of the region higher education planning has operated as an integral part of national development planning. This integration reflects a strong belief that higher education should be regarded as an instrument of socio-economic development and that plans for higher education should be linked to the goals and resources of the country as a whole. Thus, to take the case of Bangladesh as an illustration, experience with long-term planning for higher education dates back to 1955 as does experience with five-year national development plans. There were three-five year plans during the Pakistan period (1955-1970), while since independence there have been two five-year plan periods (1973-1978 and 1980-1985), intervened by a two-year plan period (1978-1980). Now the country has entered a further five-year plan period (1985-1990). Over the period since 1955, planning for higher education has never been separately undertaken, but has always formed a part of the plan for the total education sector within a national development plan.

Within this arrangement, of integration of higher education planning with general development planning a number of points of tension are often experienced. The first relates to the priority given to the education sector within a development plan, and, within the education sector, to higher education in particular. Often educators consider that education is not given the priority it rightly deserves, but governments face difficult choices in allocating resources in response to claims from different sectors, such as agriculture, housing, health and transport.

A second tension relates to linkages between national development plans and higher education plans, and to the extent to which special agencies concerned with higher education are able to determine detailed planning content. Experience from a number of countries suggests that the integration of national development and higher education planning works best when national developments plans determine broad outlines for each sector, leaving substantial detail to be determined within sectors.

Planning perspective

Some variety is evident in the particular approaches to long-term planning used by different countries in the region. While all countries to some extent relate higher education planning to future estimated manpower needs, there are considerable differences in the extent to which manpower considerations influence actual planning. In China and Viet Nam, for example, detailed forecasts of manpower needs constitute a centre-piece to planning. In China a nationwide programme of forecasting manpower needs has been conducted and a 15-year plan (1986-2000) for educational development has been drawn up. For a relatively long period, higher education can be expected only to meet first of all the urgent manpower needs dictated by economic growth and social development, and it is unlikely that China will be in a position to satisfy widespread social demands for education. The actual scale and rate of growth of higher education development will be closely tied to manpower considerations. Beginning in July 1983, an extensive programme of taking stock of the existing professional and semi-professional manpower and making forecasts for future needs was undertaken involving the active participation of all the central ministries and agencies of government. The results indicated that aggregate demand for specialized personnel for

eighteen years from 1983 to 2000 would be 34 million graduates, of whom 700,000 should be at the post-graduate level, 8.7 million at the baccalaureate level, and eight million should be graduates of short-cycle courses.

Approach differ also in the emphasis given to social demand. While some countries formally reject social demand as a major element in planning future developments, others at least recognize that social demand should receive consideration. A small number go further and see estimates of future social demand as being crucial in making enrolment forecasts. Sri Lanka, for instance, uses a combination of social demand and manpower planning to develop enrolment forecasts, while in Korea in recent years the role of social demand has been deliberately given greater emphasis with a corresponding decrease in the emphasis given to manpower planning considerations of a more narrow kind.

Another difference in approach concerns the actual implementation of planning for higher education. Some countries develop detailed five year plans which they attempt to implement, while others have opted for greater flexibility within planning periods. Sri Lanka, for example, develops a Five-Year Plan, but this is followed by an implementation plan which is revised every two years on a rolling basis.

Still another difference in approach concerns the extent to which planning for university and non-university sub-sectors are integrated. In a number of countries, largely influenced by British higher education models, there has been a tendency for detailed developments in these two subsectors to be handled somewhat independently. However, across the region there is a growing awareness of the need for an integrated approach to the planning of the total higher education and post-school activities.

Planning mechanisms

Different countries depend on different kinds of mechanisms to take responsibility at the national level for higher education planning, with the actual arrangements reflecting national preferences in administrative/advisory structures and traditions, the way that the particular higher education system is structured, and the nation's strength of commitment to central planning. The importance of traditions and outside influences helps explain why a number of countries that have

or have had links with Britain still have specialist planning agencies for universities based on the British University Grants Committee model. This is the case with Bangladesh, India, Sri Lanka and Pakistan, but in each of these countries the agency was established as a statutory commission rather than a more limited advisory body.

Despite variations, the most common model is for planning responsibility for higher education to be shared between one or more central planning agencies concerned with national development planning, specialist higher education agencies and often Ministries of Agriculture and Health, with responsibility respectively for agricultural universities and colleges and for all medical education. Thus, in Nepal central development planning is a responsibility of the National Development Council and the National Planning Commission, while specialist higher education planning is in the hands of the National Education Committee, the Ministry of Education and Culture and Tribhuvan University. To take another example, in Bangladesh the Planning Commission of the Government has responsibility for overall planning, but its Education Division also plans for the whole education sector and allocates funds for the various education sub-sectors. The University Grants Commission plans a subsidiary role in planning and guiding higher education development. It disburses funds to universities, approves their budgets and supervises their internal development plans. Without the approval of the Commission and the endorsement of the Ministry of Education, the universities cannot undertake any programme for physical or academic expansion. The Ministry of Education oversees the development of colleges and technical education, while the Ministry of Agriculture has responsibility for the Bangladesh Agricultural University and the Ministry of Health for medical colleges.

Whatever the precise institutional arrangements for higher education planning, of crucial importance are mechanisms for co-ordination of efforts between different agencies at the national level. Generally co-ordination works best when the roles of respective agencies are clearly specified and well accepted, and when there is a strong spirit of co-operation between different agencies. Co-ordination and co-operation is also important between the national level and state and/or regional levels of government. In countries with federal political systems, there is often a tendency for national and state governments to attempt to pursue somewhat different directions and priorities for

higher education. This has been a difficulty in India and Pakistan, for example, but efforts are being made to secure more effective arrangements between different levels of government. In India most of the universities and colleges are established by state governments. However, the country's constitution places the responsibility for co-ordination and determination of standards in higher education with the Central Government, and in recent years the University Grants Commission has taken various initiatives to improve the quality of higher education. These have included grants to assist with institutional infrastructure, curricula and evaluation, and strengthening research.

Apart from permanent mechanisms, from time to time a number of countries employ special committees or commissions to deal with particular issues, or to play a major role in charting new directions for higher education. Thus, in 1985 Korea established a Presidential Commission for Educational Reform. This body, which is under the direct control of the President, is studying policy measures which may bring about reforms throughout the entire educational system, with the purpose of making education more relevant for the development of people of high achievement, able to lead the nation's development toward the 21st century. Similarly as already noted in the Philippines the Minister of Education, Culture and Sports recently created a Task Force to make recommendations to rationalize and improve state higher education. This Task Force is mandated to 'consider broad issues of policy respecting state higher education including system and institutional governance, financing, curriculum, admission, accreditation, faculty and student welfare, and research and extension functions'. In carrying out its functions, the Task Force is expected 'to gather views from the widest spectrum of institutions, organizations and interested individuals through consultative meetings and other forms of communication'.

Chapter Four

METHODOLOGIES AND ELEMENTS OF LONG-TERM PLANNING OF HIGHER EDUCATION

This chapter explores the relevance and application of particular approaches, methodologies and techniques to the task of long-term planning of higher education. While a minority countries in the region currently practice detailed and systematic planning of higher education with a time-frame of ten years or more, the symposium discussions on this topic sought to draw on experience of participants irrespective of the planning time-frame used. The chapter addresses four specific questions:

a) What methodologies and techniques are considered applicable by the different countries represented?

b) What factors inhibit the application of particular methodologies and techniques?

c) Are there adequate information structures to serve as a basis for long-term planning, particularly at the micro-level?

d) What criteria should guide the choice of appropriate methodologies and techniques in any national system of higher education?

Methodologies and techniques considered applicable

From the information presented to the symposium, it appears that the general approaches to planning for higher education adopted by countries of the region can be categorized as follows:

a) centralized approaches;
b) mixed approaches; and
c) decentralized approaches.

Those countries adopting the centralized approach, such as China. Viet Nam and Thailand, tend to have developed systematic ways of

conceptualizing the whole planning process. For example, the approach developed by China has separate forecasting and planning elements. The forecasting elements include consideration of projected levels of future economic activity and anticipation of future production levels in order to forecast specific manpower demand according to specialized categories. Consideration is also taken of the distribution of national income, population forecasts, and the effects of the implementation compulsory education (China plans to implement compulsory nine years education by the year 2000). Information from this forecasting stage is then fed into the planning model and consideration is given to characteristics of the educational structure and to standards of education. Educational statistics provide further inputs and the educational needs forecasts are then compared with the levels of educational expenditure forecast in order to arrive at a detailed long-term plan for higher education.

This broader approach enables a wide variety of different kinds of information (both of a quantitative and qualitative kind) needed to be identified and, as a result, techniques and methods can be developed to generate and collect such information. Information collected by countries using the broader centralized approach often includes the following:

Quantitative information – manpower forecasts; enrolment projections; projections of social demand; projections of demand for higher education teachers and lecturers; forecasts of future levels of GNP or of economic activity; and student progression rates.

Qualitative information – information on student and community aspirations; information from employers on characteristics considered desirable in future employees; information generated by scenario building and other means to anticipate future directions and rate of social and economic change; information on possible alternative means of tackling identified problems, such as improving quality and achieving greater equity.

Members of the symposium saw value in efforts to develop and experiment with new methods and techniques to generate qualitative information. It was reported that Korea was employing scenario building to develop perspectives on the future. To date most approaches to planning have stressed quantitative rather than qualitative information.

Those countries with less centralized approaches to higher education planning tend to conceive of planning in a more limited way. Thus, it is not surprising that higher education planners from such systems tend to think of the techniques and methodologies of higher education planning mainly in terms of means to assess manpower needs and social demand and so to develop student enrolment targets. It was reported that many countries follow some combination of manpower planning and social demand methods, although the actual emphasis given to both varies between countries. For example, in the Philippines it was noted that for higher education the social demand method is the more important one used. National systems of higher education also have varied over time in the emphasis they have given to different methods. In Korea, for example, it was reported that in the 1950s and 1960s the manpower planning method was dominant in assessing demand for higher education and in fixing enrolment targets. However, more recently the social demand method has been given more emphasis, but this is combined with manpower requirement planning for science and technological areas. In contrast, in Sri Lanka for the period 1984-1988 the University Grants Commission has deliberately opted to give manpower considerations greater influence than social demand.

Considerable interest in the three classical approaches to higher education planning as set out in the literature was shown in the discussions. These three approaches are the manpower requirement approach, cost benefit analysis and social demand forecasting. The manpower requirement approach is the best known, but the most controversial of the three. It is based on the idea that a major goal of educational planning is to promote productivity by matching demand for skills to supply. Hence the chief purpose of the approach is to attempt to forecast the future demand for educated manpower. Proponents of this approach argue that, because of the time taken to train professionals, market forces alone are unable to adjust supply of professional labour to demand. If there is no intervention, costly time-lags or over supply will result. Cost-benefit analysis or the rate of return approach is based on the criteria of economic profitability. The benefits derived from additional education are compared with the costs incurred in order to calculate the rate of return on investment in the education sector. This rate is then compared with the corresponding rates likely to be obtained in other sectors of the

economy; thus a decision can be taken whether or not it is profitable to invest further in education. With this approach, education is regarded as an investment, the benefits or which (both social and private) can be calculated and if possible maximized. The approach is based on the assumption that people with more education on average earn higher incomes than people with less education. Social demand forecasting is distinctively different. It involves making projections about future student numbers in secondary schools likely to complete the full secondary education course, with given assumptions about standards of performance likely to be achieved at examinations, higher education institution admission requirements, higher education tuition fees, and so on. Instead of basing forecasts on the needs of employers and industry, forecasts are based on consumer demand. The major aim thus is to satisfy private consumption demands for education. This approach regards higher education as a consumer good which should become available to all who seek it as rapidly as possible.

Both the manpower planning approach and the social demand approach require sophisticated techniques of analysis if reliable forecasts are to be developed. The manpower planning approach, for example, requires detailed forecasts of the level of future economic activity and industry diversification if meaningful forecasts are to be made of the supply of trained personnel needed. It was reported that, despite the wide use of this method, forecasts had been less than satisfactory and that in a number of cases the scale of error has been substantial. At the same time, many participants emphasized that their systems of higher education did not consider that this method should be abandoned, but rather that more sophisticated techniques and better data bases were required. A number also argued that, despite the problems with this method, its results were far better than planning based on guesses or to no real planning at all.

Some support was expressed for cost-benefit analysis or the rate of return method which, as noted above, considers education as an investment and provides for the calculation of benefits likely to be derived from educational investment in different fields and courses. Like the other two major approaches, this one too requires expertise of a high order and reliable statistical data bases. It was suggested that this method could be used in combination with the manpower and social demand methods. It was noted that, irrespective

of the method or combination of methods used, financial constraints play a major role in fixing student enrolment targets in higher education.

The manpower planning, social demand and rate of return methods are often thought of as constituting competing alternatives. However, many symposium participants argued that these three approaches are better seen as being complementary methods which can work well together in various combinations.

Difficulties in the successful application of particular approaches and methods

A large number of difficulties affecting the successful application of particular approaches, methods and techniques were identified. There are some obvious difficulties, for example, for those countries with other than planned economies in adopting an approach similar to that of China. Such difficulties include both ideological and administrative ones. However, here the discussion will concentrate on difficulties in the application of specialized approaches and techniques such as manpower planning, social demand analysis, rate of return analysis and scenario building. In summary, the main difficulties can be categorized as follows:

a) **Social and political problems**

Problems of this kind take different forms. It was reported that a major frustration in a number of countries is the inability of universities and colleges to withstand local social and political pressures to enrol substantially over agreed enrolment targets. As a result, efforts in manpower forecasting can be frustrated, often leading to substantial over-supply of graduates in particular fields. This problem is often particularly serious in those countries where responsibility for higher education is shared between national authorities and those of the provinces or states. Another political problem is that resulting from fragmentation of national responsibility for planning higher education amongst two or more different authorities. As a result, it is sometimes difficult to achieve a co-ordinated national approach to forecasting future manpower requirements and setting enrolment targets by field and level of course. This has been a major problem in India, but the 1986 National Education Policy advocates a unified approach.

A particularly difficult social problem relates to the relative attractiveness of different courses and to the social status accorded to particular professions. Even with the application of manpower planning, student demand can easily exceed enrolment targets in the more prestigious professional courses, such as law and medicine.

b) **Technical problems**

There are a number of technical problems that affect the application of methods such as the manpower requirement approach. One serious difficulty in many developing nations, for example, relates to making reliable forecasts of future levels of economic activity and diversification of the economy for a time-period of ten years or more. Here, there are so many variables involved where forecasting is difficult, such as the extent and continuity of foreign aid, trade barriers likely to be imposed by other nations and the effects of variations in seasons on agricultural production. Other difficulties with the manpower requirement approach relate to the extent to which one trained professional can be substituted by other workers, the correspondence between jobs and required skills, and the relationship between the number of professionals working in a particular occupation and levels of productivity. There is also a serious problem relating to credentials. One possibility that was noted is that employers of professionals and skilled workers may be just as interested in particular attitudes and social skills as in specified job-specific skill levels.

c) **Privatization of higher education**

In some countries in the region, a substantial proportion of higher education enrolments are in the private sector (e.g. 85 per cent in the Philippines), while in other countries governments have adopted a deliberate policy of encouraging the development of non-government colleges and universities, some run by commercial concerns. One consequence is that, with a substantial private sector, it often becomes much more difficult to achieve comprehensive planning let alone to apply methods such as manpower forecasting and social demand analysis, and, even more so, to set firm student enrolment targets and to secure compliance from all higher education institutions. It was reported that in the Philippines one major problem in effective planning is to secure a co-ordinated approach covering both private and public sectors.

d) **Personnel and data**

The more sophisticated forms of manpower requirement forecasting, social demand analysis, and rate of return analysis as well as various forms of social surveys and methods generating qualitative data require personnel with high level research skills, and also access to detailed and reliable data. It was reported that lack of highly trained personnel and of appropriate data bases seriously limit the extent of the application of various methods believed to be relevant for effective long-term planning of higher education.

e) **Regional disparities**

It was reported that particularly in large countries disparities between regions sometimes provide an additional constraint in the application of particular techniques of manpower planning. This is because manpower requirements must be forecast by separate regions as well as nationally, if the degree of inter-regional mobility of labour is not high. In some countries income incentives are used to attract professionals to more remote areas or to achieve a better geographical distribution of graduates in particular fields.

f) **Implementation problems**

Reference has been made already to problems of implementation, but such problems deserve the status of a separate category. Some implementation problems are more immediate. For example, in some countries manpower forecasts are used to set enrolment targets, but relevant authorities either lack the power or political will to secure compliance at institutional level. Other problems are more long-term. For example, in India efforts at manpower planning are in part frustrated by the efforts of professionals such as medical practitioners to move to prestigious civil service jobs and by considerable mobility among engineering graduates to employment in business management.

Information structures

As noted above, concern was expressed about the limitation of suitable data bases and data sources, both at macro and micro levels. While participants reported that considerable progress in some cases had been made in strengthening statistical and other data systems, especially at the national level, it was considered that limitations in

information structures still operated in many countries to restrict the likely effectiveness and scope of planning for higher education.

At the national level, there is need for a variety of different information relating to topics including population trends, economic activity, diversification of industry, labour force participation and unemployment, and school enrolment statistics including data on progression rates from one grade to another. There appears to be a need for a basic core of data in all systems but, apart from this consideration, information needs will be dependent on the particular goals and objective being sought and on the particular technical approaches and methods being used in the planning process. For instance, if the dominant method is social demand analysis, detailed information will be necessary about school enrolments; the number of students likely to graduate from high school each year and the likelihood of such graduates being qualified and wishing to enrol in higher education; detailed information on the aspirations of students, potential students and their families; information on student progression rates through higher education institutions; and information on admission requirements, levels of tuition fees, student loans, and scholarships operating in different higher education systems.

It was suggested that basic data relevant to planning should be readily available to higher education institutions, employers and the public. For example, manpower forecast information could be provided to secondary school students and their families since, presumably, major factors in student choice of courses are perceptions of prospects of employment and of likely income levels.

At institutional level, it appears that there also is a need to improve information systems. Such systems should include detailed data on student enrolments, student pass and graduation rates and student social characteristics. Further, it appears desirable for indidual institutions to have access to data at the macro level in order to help them interpret both local and national data relating to their own internal operations. A number of participants stressed the need to improve planning capacities at institutional levels. Even in major universities, it was considered that planning mechanisms and processes need to be strengthened to a considerable degree.

Criteria in choice of techniques and methods

A number of criteria relating to choice of methods and particular planning techniques were suggested in the various discussions. Perhaps the most important is the criteria of utility in relation to the specified goals, objectives and priorities for higher education in a national system. For example, if a high priority is attached to meeting manpower needs and to reducing imbalances in supply and demand for highly trained personnel, then it is likely that some variation of the manpower requirement approach will be chosen. Alternatively, if a high priority is to be given to achieving greater measure of equity, then research techniques may be needed to investigate the relative degree of participation of particular social groups in higher education and to identify barriers to increased access by disadvantaged groups, or by groups which are currently under-represented in higher education.

Second, choice of methods will be influenced by the availability of appropriate data. The manpower requirement approach, for instance, necessitates at a minimum detailed information on forecasts of future levels of economic activity, and if some sophisticated variations such as the incremental labour output ratio technique is to be employed detailed and reliable time series data are required.

Third, availability of trained personnel can restrict the choice of methods, especially those necessitating sophisticated demographic analysis or social surveys. It was perceived that deficiencies in the availability of trained personnel is a major problem in many countries of the region.

Fourth, choice of methods can be limited by particular attitudinal factors. Of particular importance, is the way that planning for higher education is conceptualized. With an extremely narrow approach concentrating exclusively on, say, manpower requirement forecasting and enrolment targets, there may be little appreciation of the value of scenario building or of research techniques appropriate to generate data on topics such as student aspirations, or the participation rates for women or other disadvantaged groups.

Chapter Five

ORGANIZATIONAL AND MANAGEMENT ASPECTS OF LONG-TERM PLANNING OF HIGHER EDUCATION

This chapter reports on the symposium discussions of a number of organizational and management issues related to long-term planning of higher education. Separate sections are devoted to the topics of integration, multi-level planning, participatory planning and the institutionalization of planning.

Integration

The processes of co-ordination and synchronization of a higher education plan with the different sectors and levels of the planning and implementing system is referred to as integration. Sectoral planning, which happens in many development programmes, poses problems for various reasons, including the following:

a) Discontent over regional disparities within countries.

b) Concern over ecological imbalances in some regions and the need for environmental management.

c) Recognition of disadvantages of excessive rural-urban migration.

d) Need for setting priorities in a holistic way.

e) Implementation of programmes and projects has to be done at various levels.

The symposium recognized that co-ordination is desirable between economic policy and educational policy, and between economic planning and education planning. Integration was seen as encompassing not just manpower projections and student enrolment targets, but also in terms of linkages with the other roles of higher education in society, i.e. knowledge and its advancement, the generation of technology, and innovative schemes necessary for social and cultural progress. If this kind of integration is achieved, then resource allocation for an activity such as research should follow in order to support

research done in colleges and universities. If the thrust is towards agriculture, for example, then research in agricultural ought to be financed adequately. It was argued that the more comprehensive contributions of higher education to society would include:

a) generation and dissemination of knowledge;
b) supply of specialized manpower;
c) leadership in socio-cultural development; and
d) the role of social critic and reflection.

It was observed that the process of planning should take account of the users of the outputs of higher education. One idea developed in the group discussions was the desirability of holding inter-ministry or intersectoral consultations in order to bridge the gap between users and higher education institutions.

In the light of the matters raised above, participants at the symposium considered it desirable to recommend integration as a matter of policy. It was also considered desirable that each government sector should be knowledgeable about its own manpower requirements. However, it was noted that different sectors may tend to inflate their requirements and thus promote their own sectoral interests. What may be called for then is the collation of all sectoral plans and manpower projections by one central planning agency in order to achieve appropriate integration of such projections, having the larger priorities in view.

Effective planning needs to provide for incentives and rewards in order to ensure the successful adoption and implementation of a plan. For example, uneven distribution of graduates between urban and rural areas may need to be corrected by giving adequate salary differentials to those willing to work in the remote areas of a country. Then and only then might particular professionals be made available in those locations where their services are needed most.

It was also noted that, as beneficiaries of the products of higher education, it may be thought necessary for industries to be required to contribute a share of their resources to support higher education, at least through scholarships and research grants. In general, there was strong support for the notion of encouraging closer collaboration between industry and higher education.

One possible measure suggested to relieve employment pressures is to encourage colleges and universities to offer courses and curricula

that will prepare young men and women for self-employment. If government employment is no longer available, ideally graduates should be able to earn a living by entrepreneurship.

The symposium noted the tendency to treat higher education as part of economic plans, but to do so strictly in manpower terms. It was argued strongly, however, that the role of higher education is not necessarily limited to manpower development. Rather, higher education also contributes to the advancement of knowledge, to developments in science and technology, and to the dissemination of information. Ideally, integration of higher education within national plans should be reflected in the financial support given to higher education. National budgets should include resource allocation for research and development in universities that are mandated to undertake scientific investigation. Such research could be geared to the upliftment of the social status of people in rural areas. Support should be available for programmes that would help stimulate industralization. Because of the strategic role played by institutions of higher learning, therefore, integration of higher education plans into national development plans is imperative.

Perhaps the most difficult type of integration is between planning and implementation. If resources become limited, plans would require modification during the operational phase. The amount of alteration needed would reflect on the soundness of the planning concepts and degree of anticipation built into the plans.

Prioritization among sectors and even among levels of education poses a problem for higher education planning. In most countries, priority is given to primary or basic education because of its being considered a democratic right and its universalization is yet to be attained. Moreover, its urgency crowds out the other educational programmes. Add to this the image of university constituents as being often restive, critical and fractious, seldoms content and frequently clamouring for reform, and often unsupportive of the political regime. One need not wonder why higher education usually receives lower priority in national budgets. Participants in the symposium felt that this situation need not be so. Although higher education may not get top priority in terms of allocation of funds, at least it ought to be given a higher priority than what it is now receiving.

In sum, participants were of the view that long range planning of higher education should aim for a condition whereby related programmes, facilities and finances are closely interrelated and mutually supportive.

Multi-level planning

The Chinese approach to long-range planning of higher education was seen by a number of participants as providing a desirable framework for role specialization at three levels: national, provincial, and institutional. This stimulated discussion of possible ideal organizational models to achieve effective long-term planning. One model which attracted some degree of enthusiasm was follows. From a central planning agency could emanate guiding principles including a framework for forecasting and standard-setting. This central agency could also determine policies governing the establishment of new institutions and the offering of new courses as well as policies for student admissions and job placement of graduates. The major responsibility for budget allocation would most likely be at the national level. At the provincial level, the major functions would be likely to include training of forecasting personnel, planning of institutions, collection of survey data and forecasting manpower needs. The institutional level could provide survey data and assessment of needs in terms of quality of education; institutions might also suggest institutional development plans as well as budgetary allocations, and recommend student admissions policy and job placement plans for graduates that could be eventually approved at the highest level. This model provides for feedback and consultation, and monitoring and evaluation functions are clearly delineated. However, it may suit some countries more than others. In particular, difficulties may be experienced in those countries where decentralization of authority is being pursued. Nonetheless, the model provides useful suggestions for allocating responsibilities among different sectors or levels of the planning and forecasting process.

In the group discussions, it was suggested that policy guidelines should be provided by a national level authority and these would guide planning at lower or sub-national levels. Such policy guidelines may include objectives or goals for higher education as well as an overall strategy for the development of the higher education sector. Regional and institutional levels under this arrangements would be responsible for field data collection and plan implementation at their

respective levels. Consultation was considered to be essential and this should be both vertical and horizontal, downwards and upwards. It was argued by some symposium participants that, if those who are involved in implementation are not brought into the planning process, then there will be lack of acceptance of the plan and implementation may well fail. It was noted that one reason for support for the concept of short or medium-term planning instead of long-term planning is the temporary duration in office of political leaders. It was suggested that this problem could possibly be remedied by having career professionals with tenure who could thus help to ensure continuity of the programme.

Participatory planning

While there seemed to be agreement about the desirability of participatory planning, how to operationalize effective participation was seen to be more difficult. From one viewpoint, participation may be adequately defined in terms of information dissemination, i.e., effective participation requires only that adequate information is given at the right time. From another view, this may not be enough since it can be argued that participation should include intensive and extensive involvement in the planning and policy-making processes. Certainly not everyone can be involved in planning and so sectoral representation on planning bodies may be one way to provide for a measure of participation. Efforts to widen representation have led some study committees or planning commissions to increase substantially in size, at times getting unwieldy. It was reported that what is sometimes frustrating about broadening participation is that, while there may be positive attitudes towards increased co-operation among the various groups, when it comes to meetings and actual work conflicts arise. As a result co-operation in some places has been less than satisfactory, work has been administratively burdensome, and efficiency has been impaired. Except for certain cause-oriented groups, students were reported as having neither the competence nor the interest to participate in long-term planning as they spend a relatively short time in the institution in question, and usually lack detailed knowledge of economic, organizational, legal and administrative circumstances. Nevertheless, co-operation was still considered necessary in the planning process between the politically responsible bodies, the central and local educational authorities and the groups likely to be affected.

Substantive planning at institutional level can allow for wide participation such that faculty, students, administrators and members of governing bodies all have involvement in planning. Each group would have the advantage of a unique perspective, type of expertise, and particular contribution to make towards planning. Planning involves both initiator and reactor roles played by various groups. Special incentives – released time, staff funds – increase the quality of such participation.

Modern education represents a vast, complex and dynamic investment that only a system of planning, policy making and development that allows for effective participation by the people concerned can in fact be sufficiently responsive and practical. The logic of participation can be pursued further and it can be argued that changes in the educational system can be judged to be successful only if appropriate changes are seen in teacher's behaviour and relationships. Also, teacher's own personal development affect their effectiveness in developing other people as well.

Institutionalization of planning

It was suggested in plenary discussions that institutionalization implies three conditions:

a) recognition of the need for planning;
b) institution of mechanisms for plan formulation, implementation and evaluation; and
c) actual policy on planning.

Several constraints to institutionalization were identified: lack of resources, lack of manpower planning, and political considerations.

Some examples of limited institutionalization of planning were identified in the Philippines, Thailand, Papua New Guinea, Viet Nam, Sri Lanka and China. Mechanisms suggested to overcome weaknesses included organizing a ministry for higher education, legislating development plans for education, and setting up a university grants commission. In spite of the establishment of specialized structures for planning, it was observed that there is still a lack of professionals capable of dealing with the complexities of educational planning, especially long-term planning of higher education. There was perceived to be a need for training of people in forecasting techniques, social research, the economics of education and manpower studies.

A multidisciplinary planning team approach was considered desirable. A multidisciplinary team should include sociologists, demographers and educationists, among others.

It was reported that, while recognized as essential, documentation has not been given adequate attention. The lack of adequate information at various levels confirms this. When properly developed, documentation should yield data on employment of graduates, and information on resource allocation and on educational goals and their formulation, among others. It was also observed that, because of lack of information, some higher education system do not have a sound basis for resource allocation. If such a system is to be based on specifications of variables, such as faculty student ratios and faculty rank distribution, then data on these variables will be needed.

It was mentioned in the discussions that, for planning to be institutionalized, it should be conducted within a formal framework or structure. The emphasis should be on systematic, continuing planning as opposed to special or *ad hoc* planning. The planning of higher education ideally should be vested in a co-ordinating agency that can deal more effectively with conflict between the institutions of higher education and the instrumentalities of stage government. Such a co-ordinating body will function more effectively if its professional staff is independent of the staff of the educational institutions as well as the staffs of state administrative agencies. A co-ordinating agency will also function more effectively if the particular roles and distinguishing functions of the various institutions are clearly defined, if adherence to these definitions is enforceable, and if provision is made for future innovative change and modification of the definitions. Moreover, the planning function should be clearly differentiated from executive duties required for statewide administration, and a clear distinction is made for a state system of higher education and planning for institutional development.

With respect to guidelines for the planning of higher education, the symposium developed the following principles:

a) The plan of higher educational development is an integral part of the national economic plan, as far as manpower planning is concerned.

b) Planning should create conditions for giving opportunities to the maximum number of people to benefit from higher education, using resources which are available at defined stages of social and economic development.

c) Optimum proportions should be specified between types of higher educational establishments, such as universities and specialized institutions, and between different forms of training, taking into consideration the economic efficiency of these different types of training.

d) It is necessary to achieve the optimum proportions and interrelationship between teaching processes and scientific research activity in order to achieve the best use of the scientific potential of higher education establishments.

e) There should be a rational distribution of higher educational establishments over the territory of the country.

f) There should be rational concentration, specialization and co-operation in the system of higher education.

g) Planning higher education should ensure development of higher educational systems in accordance with the main trends of scientific and technological developments and social progress.

One authority in the field of planning was quoted as having defined five stages in the institutionalization of planning: pre-take-off stage, take-off stage, broader coverage of the educational system, fuller integration with economic and social planning, and growing effectiveness of educational planning.

The importance of central authority in the planning process was recognized. Without the central directives for planning and central approval of plans, in many countries planning would not materialize, nor would plans be implemented. The planning effort would really not go far without the formal sanction of the powers-that-be. In any society, therefore, institutionalization of educational planning can only come about if the central authority wills it.

It became apparent in the symposium that the countries of the Asia–Pacific region are increasingly being made aware of the need for long-term planning of higher education, of the need to

improve databases, of the need for co-operation among countries, and of the importance of following an interdisciplinary approach to planning. It would then be reasonable to expect that long-term planning of higher education would be institutionalized in these countries in both macro and micro levels. The mechanisms employed would depend on the country's ideology and its unique conditions and policies.

Chapter Six

CONCLUSIONS

This chapter presents conclusions, which include possible follow-up activities by countries of the Asia-Pacific region. These are the results of efforts by members of the symposium to integrate and synthesize the findings of their deliberations. The conclusions are also based on three particular assumptions about the place and value of higher education in a context of development.

The first assumption is that higher education can contribute significantly to national development and to economic and social change through the dissemination of specialized knowledge, through the development of expertise, and through the application of both knowledge and expertise. Second, it is assumed that expenditure on higher education should be treated as a form of investment in human resource development. The third assumption is that higher education is an integral part of society and that effective linkages must operate to other levels of education and to other sectors of the economy.

Priorities

Long-term planning on higher education deserves higher priority than at present in countries of the region and should be viewed as an integral part of national development planning. Planning for technical and vocational education for meeting middle level manpower should be integrated and co-ordinated with planning for the rest of higher education or post-secondary education.

In order to make higher education more cost-effective, to achieve wider participation in higher education courses, and to promote excellence and efficiency, planning should be undertaken at both national and institutional levels. At the institutional level, such planning should seek the involvement of academic staff and administrative staff with a view to strengthening the interfaces with national development goals and, more importantly, to ensure the internal efficiency of the institutions and their effective participation in the process of

development. Corporate planning at the institutional level should be encouraged to promote internal efficiency, optimization of existing resources and generation of new resources. At the national level, planning should be highly professional and well co-ordinated, both within the higher education sector and beyond.

Approaches and methodologies

Efforts should be made to further refine and develop planning methodologies and mechanisms, taking into account the role that higher education can fulfil in terms of economic and social development and the importance of ensuring continuity and wider participation in the process of planning. Of the several mechanisms available for planning, the ones chosen and instituted in each country should depend upon several factors such as the country's size, political structure (unitary or federal), level of educational development and the aspirations of the people. Ideally, there should also be a specialist national agency for co-ordinating higher education planning at different levels and in different institutions.

Higher educational planning should be a dynamic and future-oriented process, consistent yet flexible and innovative in character, and participative and sensitive to local culture and traditions. Since there are wide variations in the pattern of organization and management structures of the higher education systems in the countries of the region, appropriate models should be developed for the management of higher education systems which will ensure the maximum productive participation of their various constituents.

Higher education planning should articulate strategies for implementation and the means to secure effective co-operation of universities and other institutions of higher education. Such planning should also specify means for evaluating and monitoring the performance and achievements of institutions.

Scope, content and time-frame

In its scope and content at the institutional level, higher education planning should take into account the need for revision of existing curricula, and the introduction of new curricula. Such changes should be made in the light of emerging socio-economic needs and technological development and should aim to provide mobility between fields and levels of study.

Long-term planning in higher education

Since higher education is a continuing process and its input of investment has a long gestation period, education plans should have a minimum of ten-year time-horizon. However, in view of the constraints of statistical data and the nature of manpower and other projections available in many countries of the region, it is desirable to have shorter medium-term implementation plans within such long-term plans. In particular, this need is important at institutional levels.

Higher education policies must be allowed sufficiently long time to operate before they are evaluated and revised if necessary. Evaluation methods used should be appropriate to the particular context and to the methods employed.

Personnel

Recognizing that long-term planning in most of the countries of the region has hitherto been inhibited by several factors such as dearth of manpower projections, absence of social demand forecasting, and lack of information on aspirations and societal needs, it is imperative that long-term planning of higher education should focus attention on training of personnel needed at various levels or stages of planning.

National governments on their part should organize training programmes, workshops and seminars to update information bases, improve planning techniques, and promote the sharing of information and regional understanding and co-operation.

Regional co-operation

As exchange of information between institutions within countries and between countries needs to be directed to achieve excellence and efficiency, higher education planning should aim to provide detailed documentation on goals and objectives of higher education planning and specify criteria for the evaluation of students, staff and curricular programmes as well as of institutions themselves.

The countries, jointly with UNESCO Principal Regional Office, should:

a) develop an inventory of all available documentation in the region on higher education planning and a directory of curricular programmes and training courses available at the higher education institutions in the countries of the region;

b) hold several regional and sub-regional seminars (followed by national seminars) on such themes as documentation on higher education planning; guidelines on evaluation of students, staff, curricula, and institutions; and planning methodologies;

c) initiate, cross-country research studies on such subjects as indicators of efficiency and excellence, methodological research studies on long-term planning of higher education, norms for allocation of resources among institutions, and research studies on higher education policies;

d) foster a programme of higher education planning internships among member countries of the region and training programmes for higher education planners.

Regional co-operation has an important role to play in higher education planning making it possible for the countries to share their expertise. The reform or reorientation of higher education has to advance systematically as much as their levels of education which calls for actions both at the national and regional levels.

Appendix

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